



**VASQUEZ BOULEVARD/INTERSTATE 70 SITE
WORKING GROUP MEETING**

**DRAFT MEETING SUMMARY
September 2, 1999
Swansea Recreation Center**

IN ATTENDANCE

Working Group

Joan Hooker, Clayton Neighborhood
Anthony Thomas, Clayton Neighborhood
Michael Maes, Elyria Neighborhood
Melissa Muñoz, COPEEN and Community Coalition
Chuck Patterson, Globeville Neighborhood
Sandy Douglas, Cole Neighborhood
Barbara O'Grady, State of Colorado, Dept. of Public Health and Environment
Frances Hartogh, State of Colorado Attorney General's Office
Bonnie Lavelle, EPA Region 8
Chris Weis, EPA Region 8
Peter Gravatt, EPA Headquarters
Matt Cohn, EPA Region 8
David Mellard, ATSDR (participating by speaker phone)
Bob Litle, Asarco
Linda Larson, Heller Ehrman White & McAuliffe (Asarco)
Celia VanDerLoop, City and County of Denver, Dept. of Environmental Health

Contact Group

Joyce Tsuji, Exponent (Asarco)
Ted Fellman, EPA Region 8
Pat Courtney, EPA Region 8
Art Varnado, EPA Region 8
Marsha
Michael Wenstrom, EPA Region 8
Nancy Strauss, Colorado Department of Public Health and Environment
Dave Folkes, Enviro Group (Asarco)
Marion Galant, Colorado Department of Public Health and Environment
Mark Rudolph, Colorado Department of Public Health and Environment
Fonda Apostolopoulos, Colorado Department of Public Health and Environment

Facilitators

Mary Margaret Golten, CDR Associates
Louise Smart, CDR Associates
Tamara Sadoo, CDR Associates (notetaker)

UPDATES

Community

Michael Maes said that he had gotten a few requests from residents for sampling, and he has sent those in to EPA. Melissa Muñoz reported that the Community Coalition has submitted a draft application for a Technical Assistance Grant (TAG). The Coalition is meeting on a regular basis with elected officials. Joan Hooker, Melissa Muñoz, and Sandy Douglas described telephone calls they had received from residents, landlords, and real estate people who want more information about the site and about the sampling program. They said that callers, especially landlords, wanted more information. They referred callers to the upcoming public meetings in Swansea/Elyria and Clayton neighborhoods. Fonda Apostolopoulos said he had spoken with someone from Northeast Housing Development who was concerned about liability. Fonda said he would provide examples of "Comfort Letters" that the State has used at the Globe site. Michael Maes said that he had gotten a few requests from residents for sampling, and he has sent those in to EPA. Ted Fellman told the Working Group he would welcome suggestions on how to get out more information about the site.

ATSDR

David Mellard reminded the Working Group of ATSDR's timeline handout (April 4, 1999). He reported that ATSDR's fact sheet on garden produce will be included in the Elyria and Swansea newsletter and will be sent out to the Cole and Clayton neighborhoods. He will compare his mailing list with EPA's and will provide any additional addresses he has to EPA. He reviewed ATSDR's upcoming activities:

- (a) David is writing a Health Assessment report to be discussed in the Health Team
- (b) Luli Rosales is heading up health promotion activities
- (c) The Division of Health Studies is deciding on whether or not to conduct any health studies
- (d) ATSDR may conduct biomonitoring

David explained the process for writing the Health Assessment:

- (a) He will write the report in sections and give these to the Health Team to review. He will rely on the data EPA has provided in its reports and National Ambient Air Quality Standards data from existing monitoring stations.
- (b) He will circulate the draft within ATSDR in December for their internal review process.
- (c) He will release the draft to the EPA on January 19.

Bonnie Lavelle asked David about the timing of his Health Assessment report and whether it would include the data from the Phase III sampling study. David said that he has to use whatever data is available and that if the Phase III data is available by November 19, he will be able to use it in his report. Sandy Douglas asked how the Health Assessment report would be used. David explained that it will be used to help

ATSDR make recommendations. For example, the Health Assessment might lead to a recommendation to change water consumption from a private well to bottled water.

David explained that decisions related to health promotion activities will be made after he does a toxicity evaluation. Then the Division of Health Education (Luli Rosales) will decide whether ATSDR needs to work with local doctors, clinics, and/or AAEOC clinics (American Association of Environmental Occupation Clinics). The toxicity evaluation involves an exposure assessment, estimating doses and comparing this information to human and animal toxicity data. This evaluation will help ATSDR decide whether or not to conduct biomonitoring or health studies. Chris Weis requested that David present the objectives of this evaluation to the Working Group. David noted that EPA and ATSDR have different objectives even though they use the same risk assessment information.

David told the Working Group that EPA prepares quantitative risk assessment reports, while ATSDR prepares qualitative risk assessment reports. He said that both agencies use the same quantitative methods but apply the information in different ways. Concern was expressed by Bob Little that a document prepared by David in conjunction with the Health Team appears quantitative and that it seems inconsistent with EPA guidance. Bonnie added that the document does not clearly present the assumptions, the basis for the conclusions, and how the doses were calculated. David explained that the document was an educational tool for the residents; he added that he is not able to write quantitative reports for ATSDR.

Linda Larson noted that Superfund law differentiates between risk assessment and risk management, and that ATSDR seems to blend the two. She raised the concern that ATSDR will be making risk management decisions before the risk assessment has been completed by the EPA. David said that ATSDR does not make risk management decisions; ATSDR does not say how the risk should be managed. Instead, ATSDR recommends what exposure should be stopped. David assured the Working Group that he will bring developing information to the Working Group. He said that he wants to work through the Health Team to decide which issues need to be addressed and that he will bring ATSDR's evaluation process to the Health Team for review. Then he will bring these issues to the Working Group for discussion.

David told the Working Group that the Health Team would like to invite EPA to join the Health Team and would like to have Joyce Tsuji participate with the Health Team when there are technical discussions. (Please see a later section of this meeting summary for discussion of the Health Team.)

Community Involvement

Ted Fellman reviewed several community involvement activities:

- (a) There have been television stories on the site on Univision and Channel 9.
- (b) He is trying to reach out to Spanish speakers.
- (c) EPA has produced a fact sheet.

- (d) The neighborhood newsletters have included information on past and present sampling and on the progress on access.
- (e) There will be two open houses on Risk Assessment. These open houses will be "stop-by" vents, with no formal presentation.
 - (1) Wednesday, September 22, 4:00-8:00PM at the Swansea Recreation Center
 - (2) Tuesday, September 28, 4:00-8:00PM at Harrington School.
- (f) There are Risk Assessment fact sheets at different levels of complexity.
- (g) There is a new video on Risk Assessment. He is getting it translated into Spanish.

Sandy Douglas requested a copy of EPA's mailing list. Bonnie agreed to give the community representatives a list of names and addresses in their neighborhoods; this list will not include information on who has or has not agreed to access.

Technical Meeting (August 17) on Soil Characterization Study

There was a Technical Meeting to discuss EPA's response to comments on the Soil Characterization Study, which is in draft form. Bonnie Lavelle reported that EPA has modified its study as follows [see Bonnie's Summary of Technical Meeting, attached to this Meeting Summary]:

- (a) As requested by the State, EPA will look at yards in the intermediate range of concentration, in addition to low and high concentration yards.
- (b) The Standard Operating Procedure (SOP) has been modified to include the metals that the state requested, plus one more: thallium indium, mercury, selenium, and antimony.
- (c) The report will include photographs from Dr. Drexler's electron microprobe work.
- (d) The study will explain the basis for EPA's conclusion that arsenic co-occurs with lead.
- (e) EPA will add a 7 ppm sample that EPA already has to the study.

Bonnie distributed the handouts from the Technical Meeting. She told the Working Group that the plan for the Soil Characterization Study is about to be finalized. EPA will keep in close touch with the State on the progress in getting the sample of Pax speciated by Dr. Drexler. Although the plan is to release the speciation data to everyone early, Bonnie cautioned that it will be necessary to see the whole study before drawing conclusions. Bonnie is interested in having a public meeting on the Soil Characterization Study and reminded the Working Group that the purpose of this study is to determine if there are tools that can be used to determine the source of the contamination. The final study plan will be mailed by September 7 to the Working Group, and the sample of PAX will be sent to Dr. Drexler the week of September 6.

PHASE III SAMPLING

Progress on Access

Bonnie Lavelle reported on progress on access. EPA has received access permission from 1200 properties and has sampled 418 of them. There are 1433 properties where EPA has not yet received access permission. Sampling teams have gone door to door to obtain additional access permission. The next step is to try to reach people in the evenings during the week. Sandy Douglas related her own experience, where she went with the samplers to her next-door neighbor. Her neighbor agreed to the sampling, and it was done then. The Working Group agreed that the person-to-person approach can be more effective than an official EPA letter. A suggestion was made to include the question on the sampling sheet: "Would you be willing to help us talk to your neighbor?"

Quality Assurance

Bonnie told the group that EPA is conducting rigorous quality assurance tests in the field laboratory and is pleased to report that they are not having any quality control problems. EPA is meeting a 10 ppm detection level.

Garden Vegetables

Bonnie explained that EPA wants to amend the Sampling Plan to include garden vegetables, and she distributed a Draft Vegetable Sampling Design. She asked the Working Group to review this and give her written comments (comments by e-mail are fine) by September 10. EPA is targeting 12 to 15 yards, spanning all concentration ranges and located throughout the entire study area. The EPA will take samples from each type of vegetable in fifteen gardens and will collect soils from the gardens. The objective is to understand the uptake from the soils into the vegetables. EPA will use this information in calculating risks from ingesting vegetables, in order to make a decision about cleanup action.

- David Mellard noted that the ATSDR's garden fact sheet was based on USDA data, not on data from this site.
- Chuck Patterson asked to see literature references regarding the absorption of arsenic by plants, the EPA biosolids report, and the USDA information used by ATSDR.
- Joyce Tsuji recommended that EPA review the Tacoma smelter data, which included a large garden study.
- Sandy Douglas suggested that EPA include in their study the extensive garden of one of her neighbors.

Attic Dust

Bonnie reported that she has not yet made a final decision about whether to include attic dust in the study. She distributed a handout on attic dust and said that there will

be a technical meeting to help EPA make its decision about including attic dust. Chris Weis reminded the group that although conducting the attic dust would be possible, such a study would need to be based on clear objectives.

Joan Hooker mentioned that new neighbors' children were experiencing asthma problems and other breathing difficulties. Matt Cohn said that the community's "toxic tour" for EPA managers has led to a new enforcement effort in the community. EPA, in coordination with the state, is conducting inspections and has already found some violations. EPA has placed special air monitoring equipment (Line of Sight Monitors) in the area to see if facilities are adversely affecting ambient air quality. There are 476 regulated entities in the site area, and EPA would like input from the community on priorities for inspections. Community members should contact Matt with their concerns about facilities, and he will pass these on to the EPA attorney who is working on this enforcement effort.

RISK ASSESSMENT PRESENTATION

Chris Weis announced that there are two new national videos on risk assessment which explain how risk assessments are conducted. These videos include photos from the VB/I-70 site. There is a ten-minute version and a 37-minute version.

Chris presented a series of slides (also in handout form) and updated the Working Group on the risk assessment process. He said the exposure assessment and risk assessment are built around the Conceptual Model that was developed with the input of the Working Group. Chris reviewed the formulas that he will use:

- to define the intake, or dose, resulting from exposure to soil contaminants
- to measure the exposure to contaminants in soil and dust
- to measure the exposure to contaminants in homegrown vegetables

A number of assumptions serve as defaults in applying these formulas – assumptions about:

- quantities and types of homegrown vegetables eaten by different age groups
- body weights for children and adults
- soil intake rate for children and adults
- frequency of exposure (days/year in the yard)
- number of years a resident will live in their home

The assumptions are based on national information. EPA wants feedback from the community on whether these assumptions seem accurate for residents in this site.

Joyce Tsuji said that Region 7 has published a report on similar studies and recommended that Chris review this work.

BIOAVAILABILITY OBJECTIVES AND STUDY DESIGN

Chris described the objectives and study design for the bioavailability study that will measure the fraction of material ingested which is absorbed into the blood:

- to determine whether VB/I-70 soil arsenic is absorbed to a lesser or greater extent than freely soluble arsenic in water
- to estimate a site-specific absorption fraction for soil arsenic which is protective and plausible for human health risk assessment

This study is conducted by feeding young pigs differing doses of arsenic (no arsenic, water soluble arsenic, and mid-range and high-range doses of arsenic from the site soils). Chris emphasized that this is *not* a health effects study – it is not about seeing how much arsenic it takes to make a pig sick. Instead, it is a study to measure gastrointestinal absorption, how much arsenic is absorbed in the pigs' blood.

Request for Feedback on the Exposure Parameters and the Bioavailability Study Design

Chris asked the Working Group to provide written comments on the exposure parameters and on the objectives and study design for the bioavailability study. Community members said it would be easier to provide feedback if there was a clear set of questions for them to address. EPA will develop a list of the assumptions and related questions to elicit a response from the community on the accuracy of these assumptions. The community representatives can take the questions to their neighborhood association meetings, and the questions can be available at the upcoming open houses. Joan Hooker told the group that the community representatives have the ability to make an announcement over the telephone so community members can call back with their responses.

Barbara O'Grady expressed concern that it is difficult to go to staff with a request for comments on charts (the copies of the slides). She would like to have text to review. Celia VanDerLoop said that it would help her to have a skeleton of the Risk Assessment so she could see how the pieces fit together. There was discussion about the appropriate level of comments at this stage of design. There is tension between having such a developed document that people feel that they didn't have an opportunity to influence the design and having just a set of formulas and chart of assumptions with no descriptive text so that people feel unsure of how to respond. Chris and Bonnie agreed to prepare a skeletal outline of the risk assessment and to create a format that would be easier for Working Group members to make comments on.

David Mellard expressed appreciation for the preliminary general discussions the Working Group has had on the design of the studies. As the Working Group provides input on the conceptual foundations of the risk assessment, it helps Chris put the pieces of the puzzle together. He emphasized that this preliminary input is not a substitute for

the formal review that will occur later in the process. Chris explained that he is particularly looking for such input as was given earlier, the referral to other studies that have been done on vegetables.

BIOMONITORING

David Mellard discussed the possibility of conducting biomonitoring for residents in the site area. During Phase 1 and Phase 2 sampling, there were 21 yards which had arsenic concentrations over 450 ppm and/or lead concentrations over 2000 ppm. EPA offered to collect biological samples from those residents. If Phase 3 findings follow a similar pattern, David estimates that there will be 30-40 homes with similarly elevated concentrations above the action level. He suggested that the community will probably ask whether EPA or ATSDR will collect biological samples from residents in those homes.

The agencies described the following options for biomonitoring:

- (a) EPA has an open work assignment, with protocols and standard operating procedures (SOPs) in place to do biomonitoring if someone from the site asks for it. However, EPA would welcome help from ATSDR and/or an organized transfer of this task to ATSDR, conforming to EPA SOPs. EPA has had plans to test urine, hair, and blood of residents as part of the removal program for people with removal yards and to provide this as a service.
- (b) ATSDR has a group that specializes in biomonitoring. David will present the VB/I-70 data to them, including information on the past biomonitoring effort (the week of September 7). The ATSDR group will make a decision (the week of September 14) on whether to do biomonitoring of residents in homes with concentrations of contaminants above the action levels. ATSDR would work with EPA to ensure that protocols are followed. If ATSDR conducts the biomonitoring, it will not be a study because there will be no control group. ATSDR is considering offering biomonitoring only to residents of properties with significant levels of contamination rather than to anyone in the community who wants it. If the ATSDR biomonitoring group decides to go ahead with biomonitoring at the site, the Working Group will be able to review their protocols.
- (c) The State has made a formal proposal to EPA about the State's role at VB/I-70. The State has offered to conduct exposure monitoring of blood and urine for citizens in the site, as a service to the residents. The State offers the years of experience it has conducting similar work in the Globeville community.

The following points were made in discussion:

- There needs to be a determination about whether biomonitoring is needed at all. The biological data from Phase 1 and 2 did not show an impact from the exposure.

- The time of year is an important factor in conducting biomonitoring. Because people are indoors much more in the winter, biomonitoring in the winter is less useful.
- Biomonitoring needs to be conducted before soils are removed.
- There need to be clear objectives for biomonitoring – whether it is a health intervention tool, a site-wide study, or a tool to guide other action. ATSDR's objective would be to determine whether actions should be taken to stop exposure and whether to refer people to medical intervention.
- There is a difference between an exposure study and a health study. An exposure study that measures urine to see if a person has been exposed to arsenic does not inform the person about their state of health.
- Biomonitoring on people in homes with elevated contamination levels could help indicate whether broader biomonitoring is needed in the community.
- Biomonitoring involves venal puncture and may be stressful to children. In Globeville, biomonitoring has been conducted for two years. Since early biomonitoring has not indicated exposure, parents have been reluctant to continue testing their children and many have not come back for the repeat testing which is available. People should be allowed to make their own decision about whether the procedure is too painful and unpleasant; we can't make the decision for them and deny them the opportunity for the testing.
- Where there are areas of elevated levels of contamination, the same biomonitoring that was provided in Phases 1 and 2 should be provided in Phase 3.
- From an environmental justice standpoint, people should feel they are getting the right kind of attention. If somebody in the community wants to participate in biomonitoring, their request should be honored. Monitoring should be offered to anyone in the five neighborhoods involved.
- The focus should be on the health of people and quality of life. This is not just a study of animals. Biomonitoring should be provided as a service to the community.

This discussion led to discussion of how to address residents' concerns about their health. Michael Maes explained that there is a lot of concern in the community about having been contaminated. Residents have talked about their health concerns with their doctors, but have not received satisfactory answers about the state of their health or about effects from exposure. They and the doctors need more information, such as what kind of symptoms might be expected in a worst case situation of exposure to arsenic and lead. There is a need for training for local physicians on specific toxicity issues. Nancy Strauss mentioned that there is a possibility of a health education grant to communicate better with physicians regarding the health effects of these metals. The

State can send a letter to physicians, after input from the Working Group, explaining that this is a Superfund site and that these are the metals of concern and telling them whom they can contact for more information. Michael Maes told the group that there are no physicians in the neighborhood, and he suggested using a bookmobile concept, where a physician who knows about these issues could come to the community after community meetings or on a monthly basis. David Mellard said that in two months, he will bring Luli Rosales to the Health Team meeting, and she can talk about ATSDR's health education program.

Next steps regarding biomonitoring include:

- (a) Determining objectives for biomonitoring – what should be done, to whom should it be offered, and why?
- (b) Determining who should conduct the biomonitoring
- (c) Determining whether the biomonitoring effort should be a service or a study

ROLES AND EXPECTATIONS FOR THE HEALTH TEAM

The Working Group reviewed the history of the Health Team. The Health Team was formed because the community had health issues that were not being addressed and discussed in the Working Group meetings. They wanted a forum where community people could organize themselves and get answers to health-related questions. In particular, the community was interested in the health implications of gardening and what steps they should take regarding gardening. Through the Health Team meetings, ATSDR was able to address health issues that were different than the focus of the Working Group meetings and was able to clarify some technical discussions that had occurred at Working Group meetings. The community began to use the Health Team as a resource. There has been confusion about whether or not the EPA should be or wanted to be included in the Health Team. In the past, EPA was not been informed of Health Team meetings or invited to participate. There was never an intention for the Health Team to be divisive among the agencies. Now, the community has come to rely on the Health Team as a forum for raising their concerns about poor health and cancer rates in the community. In addition, ATSDR sees the Health Team as an opportunity to get input to ATSDR's thinking on ATSDR activities, documents, and decisions.

Michael Maes explained that community members are concerned about the state of their health. People in the community believe that EPA deals strictly with the environment and do not see the connection between people's health and environmental health. He explained that in Working Group meetings, community representatives have felt that their concerns about their health have not been addressed because the focus has been on the technical issues related to the site investigation. Bonnie Lavelle said that the EPA's mission and the purpose of this project is to protect human health; this is complementary to ATSDR's mission. She said that the EPA is supportive of health education and recognizes ATSDR's expertise in health education.

EPA prefers to combine Health Team and Working Group discussions and activities. However, there was not support for this suggestion. Instead, the EPA was invited to participate in the Health Team and to bring any issues from the Health Team into the Working Group for further discussion rather than add three to four hours to Working Group meetings and slow down the progress of the Working Group on the site investigation and risk assessment activities.

The following is a composite of the Working Group's discussion about the Health Team and is a proposal for further discussion and decision making by the Working Group at the October 7 meeting:

Purpose: The purpose of the Health Team is to provide an opportunity for community and agency representatives to talk about local health concerns, to address the community's questions related to their health, and to give the community a chance to provide input to government about their health. The Health Team will be an initial discussion forum about ATSDR activities, documents, and decisions. In recognition that Vasquez/I-70 is an environmental justice community, the Health Team serves as a way for the community to have their voices heard and to create clarity within the community about health issues.

Composition: The Health Team consists of:

- All community representatives on the Working Group
- Representative(s) of the State Department of Public Health and Environment
- Representative of the City Department of Health
- Representatives of ATSDR
- Representative(s) of EPA
- Technical representative of Asarco, for technical Health Team discussions

Procedures:

- The Health Team will meet monthly.
- David Mellard, with input from the Working Group, will draft an agenda and set of objectives for each Health Team meeting. The facilitators will circulate this agenda to all Working Group members.
- The ATSDR timeline will be used to set a sequence of topics and dates for the Health Team for the next 6 months.
- The Health Team will inform the Working Group of its activities at the Working Group meeting following each Health Team meeting. David Mellard and Susan Muza will make an oral presentation to the Working Group summarizing the preceding Health Team meeting.
- EPA – or any Health Team member – can bring any issue from the Health Team into the Working Group for discussion.
- Health Team discussions relevant to the site investigation and risk assessment will be brought into the Working Group.

NEXT MEETING DATES OF THE WORKING GROUP

Thursday, October 7 – 8:30AM to 3:00 PM (Please note the need for a longer meeting)

Thursday, November 4 – 8:30 AM to ? (length to be determined at the October meeting)

Councilman Davis will be invited to attend the next meeting.

Bonnie Lavelle offered to come to any Community Coalition meeting, if desired.

EVALUATION OF THIS MEETING

- Excellent meeting, good discussion
- More doors were opened
- Chris's presentations were helpful and should be continued
- The Working Group got a lot accomplished through discussion without getting involved in personal stuff
- Next time, have the City Councilman attend

HANDOUTS AT THIS MEETING

Fact Sheet #4, September 1999 – Open House: Learn More about Risk Assessment

SOP – Soil and Vegetable Sampling for Residential Gardens

Memo – Draft Vegetable Sampling Design

Draft Risk-Based Sampling Report: Indoor Household and Attic Dust

Technical SubGroup Meeting, August 17, 1999 – Meeting Summary

VB/I-70 Workgroup Risk Assessment Presentation, September 2, 1999 – Viewgraphs